AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method of determining a DC offset in a communications signal received via a communications channel, the communications signal comprising a sequence of training symbols; the method comprising:

providing a channel estimate of the communications channel based on said sequence of training symbols;

determining, based on the channel estimate, an estimate of a noise contribution introduced by the communications channel; and

determining an estimate of the DC offset from the determined estimate of the noise contribution.

2. (CURRENTLY AMENDED) ~~A~~ The method according to claim 1, ~~characterized in that~~ wherein the step of determining the estimate of the noise contribution comprises determining the estimate of the noise contribution from a difference between a number of received training symbols and corresponding expected training symbols based on the determined channel estimate.

3. (CURRENTLY AMENDED) ~~A~~ The method according to claim 1 or 2, ~~characterized in that~~ wherein the step of providing the channel estimate comprises treating a potential DC offset as an uncharacterized interference contribution.

4. (CURRENTLY AMENDED) ~~A~~ The method according to ~~any one of claims~~ claim 1 ~~through 3~~, ~~characterized in that~~ wherein the step of determining an estimate of the DC offset from the determined estimate of the noise contribution comprises calculating an inner product of a rotation trend vector and an estimated noise vector representing the determined estimate of the noise contribution.

5. (CURRENTLY AMENDED) ~~A~~ The method according to ~~any one of claims~~ claim 1 ~~through 4~~, ~~characterized in that~~ wherein the step of determining the channel estimate comprises simultaneously determining a desired synchronization position of the sequence of training symbols with respect to a received signal burst of the communications signal and a desired size of an equalizer window of a channel estimation-based equalizer.

6. (CURRENTLY AMENDED) ~~A~~ The method according to claim 5, ~~characterized in that the method~~ further ~~comprises~~ comprising:

determining a number of channel estimates of the transmission channel as a function of the synchronization position and a size of the equalizer window; and

determining the desired synchronization position and the desired size of the equalizer window by calculating an error measure based on the received signal burst and the determined estimates for a number of selected values of the synchronization position and of the size of the equalizer window.

7. (CURRENTLY AMENDED) ~~A~~ The method according to claim 6, ~~characterized in that~~ wherein:

the step of determining the desired synchronization position and the desired size of the equalizer window by calculating an error measure based on the received signal burst and the determined estimates for a number of selected values of the synchronization position and of the size of the equalizer window comprises selecting the values of the size of the equalizer window between predetermined upper and lower bounds; and

the method further comprises determining the upper and lower bounds based on at least a desired size of the equalizer window as determined for a previously received signal burst.

8. (CURRENTLY AMENDED) ~~A~~ The method according to ~~any one of claims~~ claim 1 ~~through 7~~, ~~characterized in that~~ wherein the method further comprises averaging the received communications signal over a received signal burst.

9. (CURRENTLY AMENDED) ~~A~~ The method according to ~~any one of claims~~ claim 1 ~~through 8~~, ~~characterized in that~~ wherein the communications signal comprises a signal in accordance with the GSM specifications.

10. (CURRENTLY AMENDED) ~~A~~ The method according to ~~any one of the claims~~ claim 1 ~~through 8~~, ~~characterized in that~~ wherein the communications signal comprises a signal in accordance with the EDGE specifications.

11. (CURRENTLY AMENDED) A method of compensating a DC offset in a communications signal received via a communications channel, the communications signal comprising a sequence of training symbols~~;~~, the method comprising:

determining a DC offset in the communications signal according to the method of any one of claims 1 through 11; and

manipulating the communications signal to compensate for the determined DC offset.

12. (CURRENTLY AMENDED) ~~A~~ The method according to claim 11, ~~characterized in that~~ the method further comprises:

determining a channel estimate of the communications channel based on the manipulated communications signal; and

filtering the manipulated communications signal in an equalizer based on the determined channel estimate.

13. (CURRENTLY AMENDED) An arrangement for determining a DC offset in a communications signal received via a communications channel, the communications signal comprising a sequence of training symbols; the arrangement comprising:

processing means adapted to provide a channel estimate of the communications channel based on said sequence of training symbols;

processing means adapted to determine, based on the channel estimate, an estimate of a noise contribution introduced by the communications channel; and

processing means adapted to determine an estimate of the DC offset from the determined estimate of the noise contribution.

14. (CURRENTLY AMENDED) A receiver for receiving a communications signal via a transmission channel, the receiver comprising means for receiving a communications signal and an arrangement for determining a DC offset in the communications signal according to claim 13.